

CLAIMS

What is claimed is:

1. A method of producing corn hybrid seed in a production field comprising:

- 5 a) planting a female corn inbred which is homozygous for the GaS allele;
- b) planting a male corn inbred line which is homozygous for the GaS allele, and
- c) allowing said male to cross with said female to produce F₁ hybrid seed which is homozygous for the GaS allele, and harvesting the resultant F₁ hybrid seed.

10 2. The method of claim 1 wherein said female inbred is an elite yellow corn inbred.

15 3. The method of claim 1 wherein said male inbred is an elite yellow corn inbred.

4. The F₁ seed produced by the method of claim 1.

20 5. A method of producing field corn comprising:

- a) planting a male corn inbred which is homozygous for the GaS allele;
- b) allowing said male inbred to cross with a second corn genotype as the female to produce F₁ hybrid seed and harvesting the resultant F₁ seed.

25 6. The method of claim 5 wherein said male inbred is an elite yellow corn inbred.

30 7. The method of claim 5 wherein said second corn genotype is an elite yellow corn inbred.

8. The F_1 seed produced by the method of claim 5.

9. An elite yellow corn inbred plant homozygous for GaS alleles.

5 10. Yellow dent or flint corn seed produced by selfing the inbred plant of
claim 9.

11. Hybrid yellow corn plants produced by using the inbred plant of claim 9
as one of its parents.

10 12. An elite inbred corn plant heterozygous for GaS and ga alleles.

13. Corn seed produced by selfing the inbred plant of claim 12.

15 14. Hybrid corn plants produced by using the inbred plant of claim 12 as one
of its parents and wherein said inbred plant has at least one GaS allele.

15. The method of claim 1 wherein said F_1 seed produced has less than .05
percent outcross seed.

20 16. The method of claim 1 wherein said F_1 seed produced has less than .01
percent outcross seed.

17. A method of producing an elite yellow corn GaS inbred comprising:

- a) crossing a corn inbred containing the GaS allele with an elite yellow corn inbred to produce an F_1 hybrid seed;
- b) planting said F_1 hybrid seed to produce F_1 plants;
- 5 c) self pollinating said plants and, within four hours, also pollinating said plants with pollen from a purple marker corn to produce corn ears;
- d) selecting said ears having no purple kernels;
- e) planting kernels from said selected ears to produce a plant; and
- 10 f) repeating steps c), d) and e) from 1 to 7 times to produce a new GaS corn inbred.

15 18. A method of selecting GaS GaS homozygous corn plants from corn plants heterozygous for GaS ga in a segregating population comprising:

- a) crossing said plants with pollen from a purple seeded plant;
- b) self pollinating said plants between about 4 hours and about 40 hours after said cross; and
- c) harvesting ears from said plants which have no purple seeds.

20 19. The method of claim 18, wherein said self pollination is completed between about 16 hours and about 30 hours after said cross.

20. The seed produced by the method of claim 18.